

Mapping Community Readiness for Wellness Tourism Development through Posyandu Empowerment and Local Culinary Innovation

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Abstract. Community-based nutrition education and wellness tourism are increasingly recognized as complementary approaches to strengthening public health and supporting sustainable local development. This community engagement program aimed to build the capacity of Posyandu (Integrated Health Service Post) cadres and residents of Penatih Dangin Puri Village, Denpasar, Indonesia, in preparing local foods as functional culinary products, and to conduct an initial, descriptive assessment of the village's readiness for wellness tourism development. The program was designed as a participatory, community-based intervention with descriptive evaluation, comprising outreach sessions, culinary training in the preparation of two local functional products: Bubur Moreng (a moringa-leaf-based porridge) and Bali Herbal Sunset (a traditional spice-based beverage) along with participatory mapping of the village's tourism assets using the four-A framework (Attractions, Access, Amenities, Ancillary Services). Post-training evaluation indicated positive participant perceptions of the two products and a general readiness to reproduce them at the household or Posyandu level, along with a willingness to promote them as a local culinary attraction. The mapping results suggest that the village possesses preliminary physical and institutional assets including a jogging track through rice fields and an active Posyandu/PKK network that could support future wellness tourism development, although further product testing, continued mentoring, and validation with tourists or consumers are still required. This activity offers a preliminary and potentially transferable model for linking grassroots nutrition programs with early-stage wellness tourism readiness in comparable rural or peri-urban communities.

Keywords: Community Empowerment, Community Readiness, Functional Culinary, Local Food, Supplementary Feeding, Wellness Tourism.

1. Introduction

Global tourism trends indicate a shift in traveler preferences from conventional recreational tourism toward wellness tourism, a form of tourism that emphasizes experiences supporting physical, mental, and social well-being through sports activities, consumption of healthy foods, use of herbal plants, and interaction with the natural environment and local culture (Sunarya et al., 2024). Villages with natural resources, green open spaces, and local food potential have the opportunity to be

developed as community-based wellness tourism destinations. Penatih Dangin Puri Village has preserved its rice paddy fields amid urban development, providing both ecological value and green open spaces that enhance environmental quality and public health. The village features a jogging track approximately 1.5 km long through the rice paddies, which residents have been using for exercise and recreation. However, this trail currently serves solely as a local sports facility and has not yet been integrated with supporting products—particularly functional culinary offerings that could add value to the wellness tourism experience. To encourage regional development and public welfare, a tourism development approach that involves active community participation is needed through the development of tourism villages (Gautama et al., 2020).

The specific issue underlying this initiative is the gap between the availability of the village's physical assets (the jogging track) and the lack of functional culinary offerings, as well as the absence of institutional readiness at the local level to complement these assets and transform them into a comprehensive wellness tourism attraction. The development of village-based wellness tourism requires synergy between spaces for physical activity and the provision of functional/healthy culinary attractions (functional food tourism). Setini et al. (2025) explain that the availability of functional foods based on local resources is a key component of wellness tourism development. Processed local food products have the potential to serve a dual role: at the household level or through the Posyandu supplementary feeding program to improve community nutrition, while also functioning as functional culinary products that support the initial economic readiness of the village through healthy culinary tourism attractions (Arianto, 2022). Posyandu were selected as the entry point for the program because their volunteers have strong household networks and experience in nutrition education; thus, their role can be operationally expanded to serve as early-stage catalysts for providing village culinary products—rather than merely acting as household health educators. Kusuma et al. (2021) demonstrate that empowering Posyandu volunteers through training can enhance the community's capacity to develop sustainable innovations based on local resources.

Based on the above discussion, this community service activity aims to: (1) improve the understanding and skills of Posyandu cadres and residents in processing two local functional food products (Bubur Moreng and Bali Herbal Sunset), and (2) conduct a preliminary assessment of Penatih Dangin Puri Village's readiness for wellness tourism development based on the 4A objective indicators. A place can be developed into a tourism destination needs to fulfill 4 (four) tourism components called 4A, namely attractions, accessibility, amenities and ancillary (Millenia et al., 2021)

The evaluation of the activity is designed to answer two questions: (a) what are the participants' perceptions and readiness after the training to independently reproduce local functional food products, and (b) to what extent do the village's physical and institutional assets meet the 4A-based wellness tourism readiness indicators. The main contribution of this activity is to offer an empowerment model that links the role of grassroots health institutions (Posyandu) to the early stages of community-based wellness tourism development, which has the potential to be replicated in villages with similar characteristics.

2. Methodology

This community service activity was a participatory, community-based intervention with quantitative and qualitative descriptive evaluations, conducted in Penatih Dangin Puri Village, on June 20, 2026, for four hours.

The empowerment subjects included Posyandu and PKK cadres, as well as local village officials, with a total of 20 participants. Participants were aged 30–50 years. Participants were selected using purposive sampling based on active membership in Posyandu or PKK. Other specific demographic data were not collected in detail, and this was explicitly acknowledged as one of the limitations of the initial data collection. Participation was voluntary, and participants provided verbal consent before the activity began, without a formal institutional ethics review (which was considered a reasonable limitation for small-scale community service activities).

The activity was carried out systematically in five stages:

- 1) Preparation and outreach regarding the activity to village officials and prospective participants;
- 2) Nutrition education and functional food provision through the delivery of theoretical material by the community service team;
- 3) Functional culinary training, in the form of cooking demonstrations led by experts, with participants assisting in the demonstration process (rather than full independent practice by each participant), for two products: Bubur Moreng (a functional porridge made from moringa leaves) and Bali Herbal Sunset (a functional beverage made from traditional spices ginger, turmeric, lemongrass, and secang wood);
- 4) Participatory tourism mapping of health tourism potential through in-depth field observations and focus group discussions (FGDs) with village officials and area managers at three main locations/points (namely the gazebo, one point along Trail 2, and Sanitation Area 1), given that the village authorities have not yet completed mapping the entire jogging trail as it is still in the planning stage. Mapping was conducted using objective indicators of tourism readiness (the 4A components): Access (physical condition and accessibility of the rice field jogging track), Amenities (availability of sanitation facilities, rest areas, and food service facilities), Attractions (the natural beauty of the rice field landscape and the availability of herbal/healthy culinary offerings), and Ancillary Services (readiness of local institutions to consistently manage and serve healthy culinary products);
- 5) Post-activity evaluation was conducted using a structured questionnaire. The 4A indicator is categorized based on the triangulation of field observation results and FGD findings across three sub-criteria per dimension, according to the following rules: the “Ready / High Potential” category applies if ≥ 2 of the 3 sub-criteria are met without fundamental obstacles; “Needs Strengthening” if only 1 of the 3 sub-criteria is met; and “Not Yet Ready” if most sub-criteria are not met. The sub-criteria for each dimension are as follows: Attractions (a) availability of natural assets/landscapes, (b) uniqueness compared to similar destinations, (c) availability of supporting products (culinary/herbal); Access (a) physical condition of trails, (b) connectivity to the city center/modes of transportation, (c) safety of trails for pedestrians; Amenities (a) availability of rest facilities, (b) sanitation facilities,

(c) availability of outlets/sales points for products; Ancillary (a) existence of active local institutions, (b) readiness of human resources/cadres to manage, (c) commitment to support from village officials. The final categories were determined through consensus between the community service team and village officials during a focus group discussion (FGD) based on the above criteria. Evaluation data were collected using a structured questionnaire consisting of 10 questions, covering two dimensions: (1) Household Health & Nutrition Capacity, which measures understanding of the material and the ease of preparing recipes using a 4-point Likert scale (1 = Very Difficult, 2 = Somewhat Difficult, 3 = Easy, 4 = Very Easy); and (2) Community Readiness for Tourism Products, which measures perceptions of the feasibility of commercialization and willingness to promote the products using a 3-point Likert scale (1 = No, 2 = Maybe, 3 = Yes). The instrument was developed based on a literature review and adapted to the program context; however, it has not yet undergone statistical validity and reliability testing. This is noted as one of the study's limitations, and it is recommended that future research conduct validity tests (e.g., through expert judgment or item-total correlation tests) as well as reliability tests (Cronbach's Alpha) before the instrument is used on a larger scale.

The evaluation was post-only (without a pre-test); no pre-training measurements were taken to compare participants' knowledge or skills before and after the activity. Thus, the evaluation results reflect participants' perceptions and readiness after attending the training, rather than direct evidence of improved knowledge or skills—this limitation is discussed further in the Discussion section.

Because participants assisted in the cooking demonstration led by the resource person rather than engaging in full independent practice on their own the technical skills of individual participants were not directly tested in this activity. The available data reflect participants' perceptions of ease and interest after participating in the demonstration, not evidence of independent production ability; this is noted as a limitation and discussed further in the Discussion section. Quantitative data from the questionnaire were analyzed descriptively (frequencies and percentages) to describe participants' perceptions and readiness following the training. Qualitative data from the FGDs and field observations were analyzed thematically to support the interpretation of the tourism mapping results.

3. Results and Discussion

3.1 Results

Mapping of the Objectives for Healthy Tourism Readiness in Penatih Dangin Puri Village. The results of field observations and FGDs regarding the four objective tourism indicators (4A) are presented descriptively in Table 1. The assessment at this stage is qualitative-descriptive, based on the team's observations and discussions with village officials, and does not yet use scores or a measurable assessment matrix; the development of quantitative assessment instruments for tourism mapping is recommended for future activities.

Table 1. Objective Indicators of Healthy Tourism Readiness in Penatih Dangin Puri Village

Indicator (4A)	Field Findings Element	Readiness Status & Evaluation Notes
Attractions	A scenic jogging trail through rice fields approximately 1.5 km long; diverse local spice plants and moringa.	Promising. The natural environment supports relaxation and physical activity; integration with healthy cuisine is needed.
Access	The village's main access road is easily accessible by both two-wheeled and four-wheeled vehicles; the walking trail is safe but lacks lighting, and signs marking the jogging track and warnings against littering have been installed.	Ready. The route is well-connected to downtown East Denpasar. Note: Street lighting needs to be added to improve comfort at night and at dawn.
Amenities	There are gazebos/rest areas for residents along the rice fields; basic sanitation facilities are available in the village office and banjar areas. Regarding cleanliness, the gazebos and rest areas are maintained fairly well, but trash receptacles along the jogging track are still limited, resulting in scattered trash at certain points.	Needs Improvement. There are currently no permanent outlets or stands specifically selling healthy food products, and additional trash bins and route lighting are needed.
Ancillary (Institutional)	Posyandu and PKK cadres are active; village officials are committed to supporting the healthy village tourism program.	Ready for Transformation. Local institutions are ready to adopt the role of providers of the village's functional cuisine.

Evaluation of Functional Culinary Skills and Community Readiness. Training on making Bubur Moreng and Bali Herbal Sunset was attended by 20 participants (Posyandu and PKK cadres). An evaluation was conducted once after the training (without a pre-test), covering two dimensions as shown in Table 2.

Table 2. Training Evaluation Results Based on the Dimensions of Health Capacity and Community Readiness

Evaluation Dimensions	Indicators Measured	Participant Evaluation Results (n=20)
Health & Nutrition Capacity	Understanding of functional food education materials	12/20 (60%) Strongly Agree; 8/20 (40%) Agree that the material is easy to understand
	Ease of Preparing Bubur Moreng	12/20 (60%) Easy; 8/20 (40%) Very easy to make
	Ease of preparing Bali Herbal Sunset	16/20 (80%) Easy; 2/20 (10%) Very Easy; 2/20 (10%) Fairly Difficult
Community Readiness	Readiness for independent preparation of Bubur Moreng for PMT/Families	20/20 (100%) Interested in implementing at home/at the Posyandu
	Perceived Readiness for the Commercial Production of Bali Herbal Sunset	12/20 (60%) answered "Yes"; 8/20 (40%) answered "Maybe"

Willingness to promote the product as a healthy culinary icon of the village	20 out of 20 (100%) are willing to promote it to the community and visitors
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Note: Percentages and the number of respondents (n) are calculated from a total of 20 participants who completed the post-training questionnaire. The response categories for the Health & Nutrition Capacity dimension (easy/very easy/somewhat difficult) differ in format from those for the Community Readiness dimension (yes/maybe, interested/willing); both are presented as is because they measure different constructs (ease of process vs. readiness/intention) and are not intended for direct comparison.

3.2 Discussion

The mapping results indicate that Penatih Dangin Puri Village possesses initial physical and environmental assets that support the concept of wellness tourism. The presence of a jogging track through rice fields provides green open space that supports physical activity and natural relaxation. However, as required for the integration of wellness tourism destinations (Sunarya et al., 2024), the physical environment alone is insufficient without the presence of functional culinary products that provide a holistic health experience for visitors. Post-training evaluations revealed participants’ positive perceptions regarding the ease of preparing Bubur Moreng and Bali Herbal Sunset, as well as a high level of interest in independently reproducing both products in the future. The use of moringa leaves as a basic ingredient for Posyandu-based functional foods has been proven effective in increasing nutritional knowledge and skills of cadres in utilizing local resources sustainably (Ariani et al., 2023).

The participatory learning approach—in which participants observed and assisted in the demonstration led by the presenter—aligns with Kolb’s (1984) Experiential Learning framework, which emphasizes that active engagement in the process (even if not yet full independent practice) can accelerate understanding and interest in new skills. It should be noted that, since participants have not yet engaged in individual independent practice, these findings reflect perceptions and interest following observation/participation in the demonstrations, rather than direct evidence of mastery of independent production skills; measurement of actual skills requires independent practice sessions with an assessment rubric in follow-up activities.

The ease of adopting recipes also appears to be supported by the use of local raw materials that are abundant in the village, such as moringa leaves and traditional spices. This is consistent with Empowerment Theory (Perkins & Zimmerman, 1995), which states that the process of community empowerment tends to proceed more optimally when the innovations introduced are based on potential and resources that are already familiar to the local community. From the perspective of the Theory of Planned Behavior (Ajzen, 2020), high levels of perceived behavioral control and belief in health benefits (attitude toward behavior) can explain why all participants expressed an interest in adopting Bubur Moreng on an ongoing basis. However, it is important to emphasize that the indicators measured in this study still reflect the level of community readiness, not evidence of the full success of implementing a tourist destination. As a brief conceptual outline for the commercialization and presentation of functional culinary products in rice field areas, products such as Bali Herbal Sunset and Bubur Moreng are conceptually projected to be served at rest stops or sold through simple stands/booths in gazebos near the jogging track. Although this concept has the potential to enhance tourists’ experiences after physical activities, the detailed operational

mechanisms—such as pricing structures, management schemes by community cadres or village-owned enterprises (BUMDes), and the assurance of a sustainable supply of raw materials—have not been thoroughly examined in this initial mapping activity and are acknowledged as limitations.

Not all findings are positive and require critical scrutiny. As many as 10% of participants rated the production of Bali Herbal Sunset as quite difficult, and 40% of participants answered “maybe” (rather than “yes”) regarding the product’s commercialization potential. This indicates that the community’s readiness for Bali Herbal Sunset is not as uniform as their readiness for Bubur Moreng. In terms of the process, making Bali Herbal Sunset involves mixing several types of spices (ginger, turmeric, lemongrass, secang wood) in specific proportions and sequences to achieve a balanced flavor; thus, it is understandable that some participants especially since they were only assisting with the demonstration and had not yet practiced it independently felt less confident about reproducing it themselves compared to Bubur Moreng, whose process is relatively simpler. This interpretation is a reasonable assumption based on the characteristics of the product’s production process, as this activity did not collect field notes or structured qualitative feedback from participants regarding the specific reasons behind their assessments; collecting qualitative feedback (e.g., brief interviews or reflection sessions) during follow-up activities is recommended to confirm this interpretation. Furthermore, no follow-up data is currently available to confirm whether participants actually practiced making the product independently at home after the training; this is recommended for future evaluation.

The primary novelty of this initiative lies in the integration of grassroots health institutions (Posyandu) as drivers of functional culinary innovation that serve a dual purpose: as a means of meeting community nutritional needs at the household level and as providers of initial culinary offerings to support village-based wellness tourism destinations. A number of implementation challenges were not addressed in the previous draft and need to be explicitly stated as limitations as well as items for future activities: production costs, the sustainable availability of raw materials, recipe standardization, food safety, packaging, and business licensing have not been examined in this study. Similarly, no data has been collected from tourists or potential consumers regarding interest in the products, so the connection between culinary products and the wellness tourism experience remains purely conceptual at this time.

As a follow-up, the village authorities are recommended to conduct a more formal and measurable mapping of the rice field jogging trail, in collaboration with the Denpasar city government and/or other relevant parties (such as the tourism office, the public works department, or academics). This collaboration is essential to ensure legal compliance, safety standards, and the integration of these trails into broader urban spatial planning and tourism promotion efforts, while also opening opportunities for funding or technical assistance to develop supporting facilities (amenities) that currently require further enhancement.

4. Conclusion

This community service project yielded three main findings. First, Penatih Dangin Puri Village possesses initial assets—in the form of a rice-field jogging track and active

Posyandu/PKK institutions—that have the potential to support the development of wellness tourism based on local cuisine. Second, training participants expressed positive perceptions of the two functional food products (Bubur Moreng and Bali Herbal Sunset) and demonstrated an initial readiness to reproduce and promote them. Third, further development requires more in-depth product testing (including independent practice, recipe standardization, and food safety), ongoing mentoring, as well as business model development and market validation with tourists or potential consumers. Specifically, village officials are recommended to conduct formal mapping of the rice field jogging trail through collaboration with the Denpasar city government and/or other relevant parties, in order to strengthen the trail's legal status, safety, and integration into the city's tourism planning.

This study has several limitations that should be considered in its interpretation and replication: the evaluation was post-only with no pre-test; the number of participants was relatively small (20 people), so generalizing the results requires caution; the validity and reliability of the instruments have not been tested; and data on direct economic, social, and health impacts are not yet available. Claims regarding the replication of the model in other locations are not yet supported by testing outside of Penatih Dangin Puri Village; therefore, this conclusion explicitly distinguishes between the actual findings of the study and the potential for future development.

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